

What is claimed is:

1. A waveguide fitting for connecting a rectangular waveguide to an elliptical waveguide including a sleeve having first and second sections which are
5 conductively connected; the second section being arranged for receiving an end region of the waveguide to be connected; the second section being divided by narrow capillary-action axial slots into radially springing lamellae on an inner wall of the second section; the lamellae abutting against an outer wall of the waveguide after insertion thereof; and the inner wall of the section of the sleeve
10 being constructed and arranged to receive a solder deposit.

2. A waveguide fitting according to claim 1, characterized in that the solder deposit is a shaped solder part laid in the sleeve.

15 3. A waveguide fitting according to claim 1, for connection to a helically corrugated, elliptical waveguide, characterized in that the second section of the sleeve which receives the elliptical waveguide has an inner profile approximately complementary to the helical corrugation of the waveguide.

20 4. A waveguide fitting according to claim 3, characterized in that the solder deposit consists of flux-containing solder wire in a helical groove in the inner wall of the second section of the sleeve.

25 5. A waveguide fitting according to claim 4, characterized in that the helical groove runs roughly in a trough of an inner profile of the second section of the sleeve, and the inner profile being complementary to the helical corrugation of the waveguide.

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6. A waveguide fitting according to claim 5, characterized in that the helical groove in the complementary inner profile of the second section of the sleeve roughly follows the trough of the helical corrugation of the waveguide.

5 7. A waveguide fitting according to claim 1, characterized in that the sleeve has, between its first and its second section, an ellipse-like annular surface which lies in a radial plane and which is spaced from an end surface of the fitting by a capillary gap; and in that between the ellipse-like annular surface and the end surface of the fitting a second solder deposit is formed.

10 8. A waveguide fitting according to claim 7, characterized in that the second solder deposit includes a flux-containing solder wire in a groove in the ellipse-like annular surface of the sleeve.

15 9. A waveguide fitting according to any of claim 8, characterized in that the end of the sleeve on the fitting side is designed as a solid ring; and in that between an inner circumferential surface of the ring and an outer circumferential surface of the fitting covered by the ring is arranged a further solder deposit.

20 10. A waveguide fitting according to claim 9, characterized in that the further solder deposit adjoins a capillary gap between the roots of the lamellae of the sleeve and the outer circumferential surface of the fitting.

25 11. A waveguide fitting according to claim 9, characterized in that the further solder deposit consists of flux-containing solder wire in a circumferential groove in the inner circumferential surface of the ring of the sleeve.

12. A waveguide fitting according to claim 9, characterized in that the further solder deposit consists of flux-containing solder wire in a circumferential groove in the outer circumferential surface of the fitting in its region covered by the sleeve.

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